

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/748,054	NARAYAN, RAGHU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael P. Mooney	2883	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 5/31/05 Amdt.
2.  The allowed claim(s) is/are 1,3,5,7-14,16 and 18-24.
3.  The drawings filed on 30 December 2003 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

## REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art, either alone or in combination, does not disclose or render obvious an optoelectronic device wherein the base is made from a ceramic material and the can structure is metallic, the base further comprises a plurality of holes extending through the upper and lower surfaces of the base, each of the plurality of holes is filled with a conductive material for conducting welding current to connect the lower cylindrical portion of the can structure to the base in combination with the rest of claim 1.

It is noted that the claim 1 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious an optoelectronic device wherein the upper cylindrical portion accommodates an optical fiber stub that is axially aligned with the optoelectronic device and the fiber stub terminates at an end surface that faces the optoelectronic device but which defines a plane disposed at an acute angle with respect to a radius that is perpendicular to an axis of the fiber stub; and a minimum distance between the end surface of the fiber and the upper surface of the base ranges from about 50 to about 100 micrometers in combination with the rest of claim 5.

It is noted that the claim 5 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious an optoelectronic device including a can structure comprising a lower cylindrical portion

coaxially connected to an upper cylindrical portion by an annular wall, the lower cylindrical portion being connected to the base; wherein the upper cylindrical portion accommodates a GRIN lens that faces the optoelectronic device but which defines a plane disposed at an acute angle with respect to a radius that is perpendicular to an axis of the GRIN lens in combination with the rest of claim 7.

It is noted that the claim 7 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a method for hermetically packaging a photodiode chip to an insulating base including attaching a can structure to the insulating base, the can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the upper cylindrical portion accommodating one of an optical fiber stub or a grin lens; the lower cylindrical portion being hermetically sealed to the base and the upper cylindrical portion being axially aligned with the photodiode chip, and wherein the attaching of the lower cylindrical portion of the can structure to the metallized upper surface of the insulation base is performed by resistance welding in combination with the rest of claim 16.

It is noted that the claim 16 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a method for hermetically packaging a photodiode chip to an insulating base including attaching a metal sealing ring between the lower cylindrical portion of the can structure

and the base using an adhesive layer located between the metal sealing ring and the upper metallized surface of the base in combination with the rest of claim 18.

It is noted that the claim 18 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious an automated process including mounting the photodiode chip to the upper metallized surface of the insulating base and within an inner region of the metal sealing ring; aligning a metal can structure over the photodiode chip, the can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the upper cylindrical portion accommodating one of an optical fiber stub or a grin lens; the aligning resulting in the upper cylindrical portion being axially aligned with the photodiode chip and the lower cylindrical portion being aligned with the metal sealing ring and vias; and sealing the lower cylindrical portion to the insulating base to hermetically enclose the photodiode chip in combination with the rest of claim 21.

It is noted that the claim 21 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a laser including a sealing member formed of an electrically conducting material and attached to the base, wherein the sealing member extends along a perimeter of the base with the photodiode chip and the electronic circuit being located within an inner region of the sealing member; and a can structure formed of the electrically conducting material, wherein the can structure is adapted to attach to the sealing member on the

base to provide a hermetic enclosure for the laser diode chip and the electronic circuit, the can structure comprising the can structure comprising a lower cylindrical portion coaxially connected to an upper cylindrical portion by an annular wall, the upper cylindrical portion accommodating one of an optical fiber stub or a grin lens; the lower cylindrical portion being hermetically sealed to the base and the upper cylindrical portion being axially aligned with the photodiode chip in combination with the rest of claim 23.

It is noted that the claim 23 is allowable because the unique combination of each and every specific element stated in the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

*Michael P. Mooney*  
Michael P. Mooney  
Examiner  
Art Unit 2883

FGF/mpm  
6/9/05

*Frank G. Font*

Frank G. Font  
Supervisory Patent Examiner  
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